

6.2 ALL INDUSTRIAL USERS

6.2.1 Introduction

The conservation requirements in this section apply to all industrial water users. In addition, an industrial user may have to comply with specific requirements under subsequent sections of this chapter. For example, a sand and gravel facility is required to use low-flow plumbing devices at the facility to the maximum extent possible in addition to meeting its regulations under section 6.6.7 of this chapter. This section also applies to facilities, referred to as “other industrial users,” that do not fit the definitions for specific industrial subsectors.

6.2.2 Water Use by “Other Industrial Users”

Other industrial users, those not regulated under subsequent sections of this chapter, accounted for about 426 acre-feet of groundwater withdrawals in the Pinal AMA during 1995. Of this amount, approximately 417 acre-feet was used by the eight largest users: those facilities using more than 20 acre-feet per year. There are 97 water rights and permits, with a total annual allotment of 9,249 acre-feet associated with this category in the AMA. Additionally, one facility, Picacho School, received 50 acre-feet of excess CAP water in 1995.

6.2.3 Program Development and Issues

The First Management Plan contained requirements for “other industrial users” but not for all industrial users. These requirements included avoiding waste, making efforts to recycle water, and a prohibition on single-pass cooling or heating. These requirements and others were included in the Second Management Plan for all industrial users.

Studies done in preparation of the Second Management Plan investigated water use associated with landscaping, heating and cooling, and sanitary and kitchen water use practices, and identified areas of conservation potential and appropriate conservation techniques. The Department concluded that the findings from consultant studies of industrial uses for the Second Management Plan still apply to current industrial use and practices. In addition, a 1996-97 Tucson AMA conservation assistance grant investigated water use practices at cooling towers and yielded additional information on water conservation potential.

These studies resulted in the following recommended techniques for achieving water conservation in the industrial sector:

- reusing or recycling water
- avoiding single pass cooling unless the water is reused
- use of low-flow plumbing fixtures
- use of low water use landscaping with efficient irrigation systems
- developing site-specific water conservation plans for large facilities

Most of these techniques are included in the conservation requirements for all industrial users detailed below and apply equally to “other industrial users,” including those with specific requirements.

The Department also inventoried the “other industrial user” category during the planning period for the Third Management Plan to determine if there were any user subsectors with sufficient usage and conservation potential to warrant specific conservation requirements. The Department found that the greatest conservation potential within the “other industrial users” category is in small cooling towers and landscape watering.

6.2.4 All Industrial Users Conservation Program

The Third Management Plan conservation program for all industrial users is similar to the Second Management Plan program. All industrial users are required to avoid waste and make diligent efforts to recycle water. Single-pass cooling or heating is not allowed unless the water is reused and low-flow plumbing fixtures must be used where feasible. Since January 1, 1994, the Arizona Statewide Plumbing Code has required use of low-flow fixtures in new construction throughout the state and some local plumbing ordinances have even more stringent standards.

There are two landscaping requirements included for the third management period. For an industrial user not regulated as a turf-related facility or a new large landscape user, there is a requirement to use low water use landscape plants for landscaping where feasible and water with efficient irrigation systems. Improving irrigation efficiency can be a source of major water savings whether the plants have high or low water needs. The Department encourages all facilities to apply water efficiently regardless of the type of vegetation planted. In addition, industrial users are prohibited from serving groundwater to vegetation planted in a public right-of-way after January 1, 2002 unless the plants are on the Drought Tolerant/Low Water Use Plant List, or any modifications to the list, for the AMA (see Appendix 5I) and are prohibited from serving groundwater to a water feature in the right-of-way if installed after January 1, 2002.

6.2.5 Industrial Conservation Requirements and Monitoring and Reporting Requirements for All Industrial Users

6-201. *Definitions*

In addition to the definitions set forth in Chapters 1 and 2 of Title 45 of the Arizona Revised Statutes, unless the context otherwise requires, the following words and phrases used in sections 6-202 through 6-203 of this chapter shall have the following meanings:

- 1. “Industrial process purposes” means water which is used by an industrial user directly in the creation or manufacture of a product.*
- 2. “Industrial use” means a non-irrigation use of water not supplied by a city, town, or private water company, including animal industry use and expanded animal industry use.*
- 3. “Industrial user” means a person who uses water for industrial uses.*
- 4. “Low-flow plumbing fixture” means a lavatory faucet, lavatory faucet replacement aerator, kitchen faucet, kitchen faucet replacement aerator, shower head, urinal, water closet, or evaporative cooler designed to meet the use rates specified in A.R.S. §§ 45-312 and 313 or the applicable county or city code, whichever is more restrictive.*
- 5. “Single-pass cooling and heating” means the use of water without recirculation to increase or decrease the temperature of equipment, a stored liquid, or a confined air space.*
- 6. “Wastewater” means water that is discharged after an industrial or municipal use, excluding effluent.*

6-202. *Conservation Requirements*

Beginning on January 1, 2002 or upon commencement of water use, whichever is later, and continuing thereafter until the first compliance date for any substitute conservation requirement in the Fourth Management Plan, an industrial user shall comply with the following requirements:

- 1. Avoid waste; use only the amount of water from any source, including effluent, reasonably required for each industrial use; and make diligent efforts to recycle water.*
- 2. Do not use water for non-residential single-pass cooling or heating purposes unless the water is reused for other purposes.*
- 3. Use low-flow plumbing fixtures as required by Title 45, Chapter 1, Article 12, Arizona Revised Statutes, or any applicable county or city code, whichever is more restrictive.*
- 4. Use plants listed in Appendix 5I (Drought Tolerant/Low Water Use Plant List, or any modifications to the list) for landscaping to the maximum extent feasible, and water with a water efficient irrigation system. An industrial user regulated as a turf-related facility under sections 6-301, et seq., or as a new large landscape user under section 6-1001, et seq., is exempt from this requirement.*

5. *Do not serve or use groundwater for the purpose of watering landscaping plants planted on or after January 1, 2002 within any publicly owned right-of-way of a highway, street, road, sidewalk, curb, or shoulder which is used for travel in any ordinary mode, including pedestrian travel, unless the plants are listed on the Drought Tolerant/Low Water Use Plant List for the Pinal AMA (Appendix 5I), or any modifications to the list. The director may waive this requirement upon request from the industrial user if a waiver is in the public interest. This requirement does not apply to any portion of a residential lot that extends into a publicly owned right-of-way.*
6. *Do not serve or use groundwater for the purpose of maintaining water features, including fountains, waterfalls, ponds, water courses, and other artificial water structures, installed after January 1, 2002 within any publicly owned right-of-way of a highway, street, road, sidewalk, curb, or shoulder which is used for travel in any ordinary mode, including pedestrian travel. The director may waive this requirement upon request from the industrial user if a waiver is in the public interest. This requirement does not apply to any portion of a residential lot that extends into a publicly owned right-of-way.*

6-203. Monitoring and Reporting Requirements

A. Requirements

For calendar year 2002 or the calendar year in which the facility first begins to use water, whichever is later, and for each calendar year thereafter until the first compliance date for any substitute monitoring and reporting requirement in the Fourth Management Plan, an industrial user shall, except as provided for in subsection B of this section, include the following information in its annual report required by A.R.S. § 45-632:

1. *The total quantity of water by source, including effluent, withdrawn, diverted, or received during the reporting year for industrial process purposes, as measured with a measuring device in accordance with the Department's measuring device rules, A.A.C. R12-15-901, et seq.*
2. *The total quantity of water by source, including effluent, withdrawn, diverted, or received during the reporting year for purposes other than industrial process purposes, listed in paragraph 1 of this subsection, as measured with a measuring device in accordance with the Department's measuring device rules, A.A.C. R12-15-901, et seq.*
3. *An estimate of the quantity of wastewater generated during the reporting year.*
4. *An estimate of the quantity of wastewater recycled during the reporting year.*
5. *A description of the primary purposes for which water from any source, including effluent, is used.*
6. *The number of acres of land that were planted with low water use plants during the calendar year as a result of removal of plants not on the Drought Tolerant/Low Water Use Plant List, or any modifications to the list, for the Pinal AMA, if more than one acre, and the method of irrigation for those acres. An industrial user regulated as a turf-related facility under sections 6-301, et seq., or as a new large landscape user under section 6-1001, et seq., is exempt from this requirement.*

B. Exemption

An industrial user who holds a Type 1 or Type 2 non-irrigation grandfathered right or a groundwater withdrawal permit in the amount of 10 or fewer acre-feet per year is exempt from the requirements set forth in subsection A of this section, unless the industrial user holds more than one such right or permit in the aggregate amount of more than 10 acre-feet per year and withdraws more than 10 acre-feet of water during the calendar year pursuant to those rights or permits.

6-204. Remediated Groundwater Accounting for Conservation Requirements

A. Accounting

Groundwater withdrawn pursuant to an approved remedial action project under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) or Title 49, Arizona Revised Statutes, and used by a person subject to a conservation requirement established under this chapter, shall be accounted for consistent with the accounting for surface water for purposes of determining the person's compliance with the conservation requirement, subject to the provisions of subsections B through D of this section.

B. Amount of Groundwater Eligible for Accounting

For each approved remedial action project, the annual amount of groundwater that is eligible for the remediated groundwater accounting provided in subsection A of this section is the project's annual authorized volume. The annual authorized volume for a remedial action project approved on or after June 15, 1999 is the maximum annual volume of groundwater that may be withdrawn pursuant to the project, as specified in a consent decree or other document approved by the United States Environmental Protection Agency (EPA) or the Arizona Department of Environmental Quality (ADEQ). The annual authorized volume for a project approved prior to June 15, 1999 is the highest annual use of groundwater withdrawn pursuant to the project prior to January 1, 1999, except that if a consent decree or other document approved by the EPA or ADEQ specifies the maximum annual volume of groundwater that may be withdrawn pursuant to the project, the project's annual authorized volume is the maximum annual volume of groundwater specified in that document. The director may modify the annual authorized volume for a remedial action project as follows:

- 1. For an approved remedial action project associated with a treatment plant that was in operation prior to June 15, 1999, a person may request an increase in the annual authorized volume at the same time the notice is submitted pursuant to subsection C of this section. The director shall increase the annual authorized volume up to the maximum treatment capacity of the treatment plant if adequate documentation is submitted to the director demonstrating that an increase is necessary to further the purpose of the remedial action project and the increase is not in violation of the consent decree or other document approved by the EPA or ADEQ.*
- 2. A person may request an increase in the annual authorized volume of an approved remedial action project at any time if it is necessary to withdraw groundwater in excess of the annual authorized volume to further the purpose of the project. The director shall increase the annual authorized volume up to the maximum volume needed to further the purpose of the project if adequate documentation justifying the increase is submitted to the director and the increase is not in violation of the consent decree or other document approved by the EPA or ADEQ.*

3. *The director shall modify the annual authorized volume of an approved remedial action project to conform to any change in the consent decree or other document approved by the EPA or ADEQ if the person desiring the modification gives the director written notice of the change within thirty days after the change. The notice shall include a copy of the legally binding agreement changing the consent decree or other document approved by the EPA or ADEQ.*

C. Notification

To qualify for the remediated groundwater accounting provided in subsection A of this section, the person desiring the accounting must notify the director in writing of the anticipated withdrawal of groundwater pursuant to an approved remedial action project under CERCLA or Title 49, Arizona Revised Statutes, prior to the withdrawal. At the time the notice is given, the person desiring the accounting must be using remediated groundwater pursuant to the approved remedial action project or must have agreed to do so through a consent decree or other document approved by the EPA or ADEQ. The notice required by this subsection shall include all of the following:

1. *A copy of a document approved by ADEQ or the EPA, such as the Remedial Action Plan (RAP), Record of Decision (ROD) or consent decree, authorizing the remediated groundwater project. Unless expressly specified in the document, the person shall include in the notice the volume of groundwater that will be pumped annually pursuant to the project, the time period to which the document applies, and the annual authorized volume of groundwater that may be withdrawn pursuant to the project.*
2. *The purpose for which the remediated groundwater will be used.*
3. *The name and telephone number of a contact person.*
4. *Any other information required by the director.*

D. Monitoring and Reporting Requirements

To qualify for the remediated groundwater accounting for conservation requirements as provided in subsection A of this section, groundwater withdrawn pursuant to the approved remedial action project must be metered separately from groundwater withdrawn in association with another groundwater withdrawal authority for the same or other end use. A person desiring the remediated groundwater accounting for conservation requirements shall indicate in its annual report under A.R.S. § 45-632 the volume of water withdrawn and used during the previous calendar year that qualifies for the accounting.